

# PATENT ABSTRACTS OF JAPAN

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(30)Priority

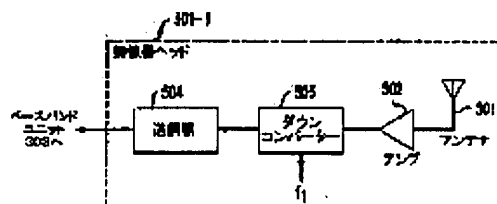
Priority number : 98 23469 Priority date : 13.02.1998 Priority country : US

(54) RADIO COMMUNICATION EQUIPMENT AND RADIO COMMUNICATION METHOD THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To reduce cost by providing a means for transmitting a first information transportation signal received by the first antenna of a first radio frequency by a first intermediate frequency via a first cable and receiving/demodulating the first information transportation signal.

SOLUTION: A plurality of information transportation signals received by an antenna 501 are down-converted into intermediate frequencies by a down converter 503. The respective intermediate frequency information transportation signals from respective radio machine heads 301-i are transmitted to a base band unit 303 on a single cable in a transmitter 504. When the plurality of radio unit heads 301-i share one cable at that time, the



transmitter 504 frequency divides/multiplexes the intermediate frequency information transportation signals from the corresponding radio machine head on the shared line and they can be demultiplexed in a base band. The base band unit 303 receives K-pieces of information transportation signals from N-pieces of radio unit heads, multiplexes them and makes them constituted of U-pieces of different traffic channels.

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審査請求 未請求 請求項の数18 O L (全 9 頁) 最終頁に続く

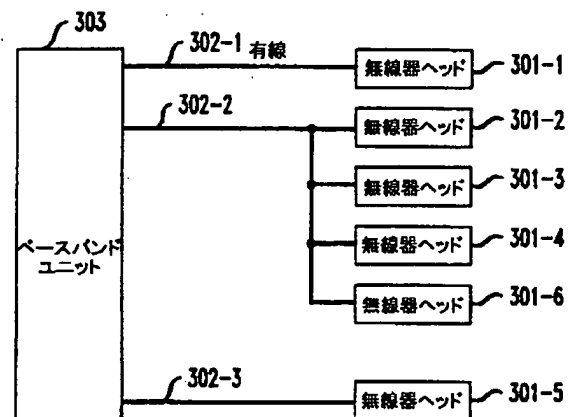
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(32) 優先日	1998年2月13日		
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(54) 【発明の名称】 無線通信装置および無線通信方法

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 ~ M•Ø P M ~A  
 icj PL ' P g - P æ^ M  
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 iej Q æ^ M Q g ~\_E R  
 o[g•Ø Q\_E R o{^~A  
 ifj Q æ^ M Q g - PL  
 ~ M•Ø Q M ~A  
 igj PL ' Q g - Q æ^ M  
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 " P æ^ M P g -A"  
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 - M•Ø QA ei~A  
 ijj Q æ^ M Q g ~\_E R  
 o[g•Ø Q\_E R o{^~A 30  
 ikj Q æ^ M Q g - QL  
 ~ M•Ø Q M ~A  
 ilj QL ' Q g - Q æ^ M  
 M A Q æ^ M †•ØLi~ L•Ø  
 - ~`¥~•Ø‡ PL † 'Mß@B  
 yz Uz imj P æ^ M ~ Q æ^  
 M \_Co[V`R oCj O•ØLi L•Ø-  
 ~`¥~•Ø‡ TL † 'Mß@B  
 yz Vz i`j PA ei ~ P†  
 g - P æ^ M M•ØXebv~A 40  
 iaj P\_E R o{^~ P æ^ M  
 P g ~\_E R o[g•ØXebv  
 ~A  
 ibj PL ~ P g - P æ^  
 M M•ØXebv~A  
 icj PL ' P g - P æ^ M  
 M•ØXebv~A  
 idj P æ^ M †•ØXebv~ L•Ø  
 - ~`¥~•Ø† 'Mß@B  
 yz Wz iej QA ei ~ Q† 50

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 ihj PL ' Q g - Q æ^ M  
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 ioj QL ' Q g - Q æ^ M  
 M•ØXebv~A  
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 - ~`¥~•Ø‡ VL † 'Mß@B  
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 M \_Co[V`R oCj O•ØXebv L  
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 † g - M•Ø PA ei~A  
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 i j PL ~ P g - P æ^  
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 iQji j PL ' P g - P æ^  
 M M•ØLi~A  
 i j P æ^ M †•ØLi~A L•Øx  
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 † 'M uB  
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 æ^ M M•Ø QA ei~A  
 i j Q æ^ M Q g ~\_E R  
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 i j PL ~ Q g - Q æ^  
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 M M•ØXebv~A  
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4

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 j~VXe %> vf -.0-~"~«0B  
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 n /L % »x[Xo h jbg"s/-~  
 ~"~«0B e t wbh" AP' MA ei  
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 O.0 u L.0B  
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 yOOQPz x[Xo h jbgROR~AL RO  
 Q|PAROQ|QAROQ|R »Æ~Æ~ P  
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 GA[C ^tF[XW iGSM,IS-54 TDMS,IS-95 C  
 MA ~j ]¢Ae æ^ M ~ l ; A 40  
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 A ~ß † wbhROP|PA† wbhRO  
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 ~ u L•Ø / •Ø-~ ~ ~«Ø-~ ~ /B  
 yOORÖz)T~A {Æ }/† wbhROP  
 | u bN}~ LAA eiTOPAA vTO  
 QA\_E R o[^[TORA M TOS L A  
 -Æ ~ ~ ¢)f•Ø / ~ ~ ~Æ~¢ØB  
 yOORPzA eiTOP~A† wbh ~  
 fiØ A ei L T[rX†Æ~¢Ø Qn I  
 ~ ~ ~¥ ~ fÆ~¢Ø~fiS ~ fÆ~¢~¢ /

Pn I ~ ~ ~ T[rX ~ c0BA eiTO  
 P~A Pn I ~ ~ ~ P > ~ ; ~ æ^  
 M M A† 'MVXe Q ^f0 / ~X  
 v AX(spurious) M M•0B  
 yOORQzA vTOQ~A m B@~e æ^  
 M M > x ~•0 [mCYA v~ 0B  
 yOORRz\_E R o[ ^[TOR~Ae æ^  
 M g ~\_E R o[g Ae† w  
 bh' e æ^ M "P' L ~ M•0-  
 ~ ¥ •0BQ > ~ »E" ~ † wbh" 10  
 P' L /L•0E A\_E R o[ ^[TOR  
 "e æ^ M g ~\_E R o[g  
 Ae æ^ M "x[Xo h jbgROR ~  
 /LL ~ g " &d»•0-~"~«0B m  
 / \_E R o[ ^[TOR~Ef, A~LT  
 [A [J >U Ao hpXtB ^[ ~ ~ »  
 c•0-~"~«0B  
 yOORSz M TOS~A† wbhROP|  
 ~flL ~x[Xo h jbgROR ~  
 e g æ^ M M•0BQ > ~ »E 20  
 ~ † wbh" P' L /L•0E A M  
 TOS~A» /LL ~ ~ •0† wbh'  
 g æ^ M g " &d» Ax  
 [Xo h jbgROR Lf} ~v NX~«  
 0 / †E0B M TOS »c~ p•0B  
 e" ~«0-~ /B  
 yOORTz}U~A {E }/ P x[Xo h  
 jbgROR u bN)~ 0Bx[Xo h j  
 bgROR~A M UOP|P~UOP|RAtB  
 ^UOQ|Q~UOQ|TA~^cUOR|P~UOR 30  
 |UA' l CU[UOS|P~UOS|UAj~m  
 ~t' l \_Co[V~R oCiUOT L A-  
 E ~)f•0 / ~ c' ~ "E~c0B  
 yOORUzx[Xo h jbgROR~A~ m'  
 † wbh »E...E' ~ j' æ^ M  
 i~ j~m' æ^ M j M A--~e  
 æ^ M "GAC ^tF[XW ] ~ ~ &d»  
 †EAt' ~X g tBbN' l i~ j~t  
 g tBbN' l ~ o[W j' ~0  
 / †E0Bx[Xo h jbgROR~A m B 40  
 @~j' æ^ M »E...E' l A  
 †Af} ~v NX A &OLj~t' †g  
 tBbN' l ~ m' ~fl ~•0- mEF  
 [ \_Co[V~R oC s cAj~tg tBb  
 N' l L' c¥" 0B  
 yOORVz M UOP|P~UOP|R~AL R  
 OQ|P~ROQ|R I[ ^fA' ^c~ • &  
 ~tB ^ c, E' -E L ~ g  
 æ^ M æ •0B  
 yOORWz}RAS ~fl0 {E ~c~U' † 50

wbh L A-E / cS' ~L ROQ|Q  
 /L•0 ~Ax[Xo h jbgROR~A-E  
 † wbh' L ROQ|Q~ &d»†E&  
 g æ^ M f} ~v NX•0 Kv  
 ~æH' ~0B&> L ~ &> †  
 wbh T|[g•0 / x[Xo h jbgR  
 OR »c p•0B@ ~ ~«0- ~ /B  
 yOORXzEf, A† wbhROP|Q~ROP  
 |T~»E ~ •0 æ^ M g " &d  
 » ~L ROQ|Q~ ; M ~ <•0 ~AL  
 ROQ|Q~Ao hpXtB ^UOQ|Q~UO  
 Q|T ~ •0B-E tB ^UOQ|Q~UO  
 Q|T~AL ROQ|P~ g æ^ M  
 f} ~v NX•0 / v†E~c0B&~  
 ~A† wbhROP| ~ M ~tB  
 ^UOQ| ~ •0B" ~ A† wbhR  
 OP|P~ ROP|U' ~ ^c~ • ~...  
 †E0-~"~»E...E~«0x[Xo h jbgRO  
 R ~... ~"E~c0' ~ 0B  
 yOOSoz {E ~c~AR' ~0L p c  
 0U' † wbh L•0 ~A ~0 †  
 wbh ~0 L p c0B@ ~ ~«0-  
 ~ /Be g " &d»M ~Ao hpXtB ^  
 [ L" f•0Kv" 0-~A~ -E tB  
 ^ »c p•0B@ ~ ~«0- ~ /B  
 yOOSPz~^cUOR|P~UOR|U~»E...  
 EAK ~\_Ci~bN W~ T v O C  
 g ~ g æ^ M fw^ » ~A S  
 M K l•0B~^cUOR|P~UOR|  
 U »c p•0B@ ~ ~«0- ~ /B  
 yOOSQz~ l CU[UOS|P~UOS|U  
 »E...E~A~ j' g æ^ M ~  
 l ; ~ † Ae æ^ M f} ~v  
 NX ~A~ j~t' ~X g tBbN' l  
 ¥" l j~m~t' l \_Co[V~R oCi  
 UOT ~ •0 ~ 0B' l CU[UOV  
 |P~UOV|U »c p•0B@ ~ ~«0-  
 ~ /B  
 yOOSRzj~m~t' l \_Co[V~R oC  
 iUOT~Am' ~ l CU[ ~ ~X g tB  
 bN' l ~ j~t' ¥" l M A m  
 \_Co[V~R oCj OZp p c~mEF[\_C  
 o[V~R oCj O s ~Aj~t' ~X g  
 tBbN' l L' c¥" l 0Bj~m~  
 t' l \_Co[V~R oCiUOT »c  
 p•0B@ ~ ~«0- ~ /B  
 yOOSSz}V~A Q x[Xo h jbgRO  
 R u bN) f ~ LA-E~Au bN†  
 Zp p c0-~"~O~ P x[Xo h jbgR  
 OR~fl1~@¥ æ •0B)V x[Xo h j



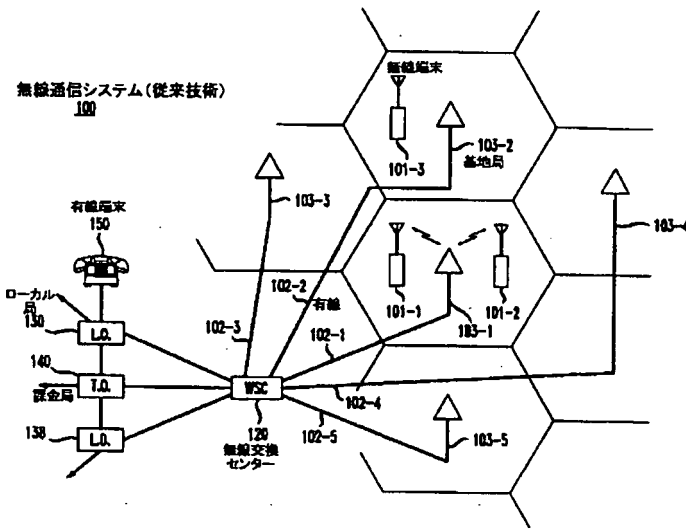
11

bgROR" A M VOP|P`VOP|RA`^c  
 ~. VOR|P`VOR|RAj~m~t` l  
 u bN† VOT L A-@ ~}f.0 /  
 ~"E~c0B  
 yOOSTz M VOP|P`VOP|R`A»E...  
 EL ROQ|P`ROQ|R I[ æ A»E...  
 E`^c~. VOR|P`VOR|R ~-@ L  
 \* g æ^ M .0B  
 yOOSUz`^c~. VOR|P`VOR|R`»  
 E...EAK ~\_Ci~bN W= T v O 10  
 Cg~PE L g æ^ M .  
 ~fw^ » A S M K l.0B  
 ~^c~. VOR|P`VOR|R »c p.0  
 B@ ~-«0~ /B  
 yOOSVzu bN† VOT`A`^c~. V  
 OR|P`VOR|R` fw^ »M M Aj  
 ~tg tBbN` l 0 / v O ~ O  
 †E~c0fw^ VOi v ZbV OZp pç  
 0fw^ VOi v ZbT` 0B  
 yOOSWzu bN† VOT`AP >~; 20  
 ~ I"† ~fl~@¥ s/"A»E ~"  
 ~0ç>~' ~¥" 0B P A` I"†  
 ~PE æ^ M .0Bu bN† ~E  
 ~ A; æ^ M fl .0-~"-«  
 0B  
 yOOSXz Q A` I"† ~A† g  
 iil pv^AC \_N^A>U ~j L»ç  
 †EA æ^ M ~A»E i dC`«  
 ]`~s EA»E L «>L @0Bu b  
 N† ~A. I AfW^ VOi v ZbT' 30  
 ~LA æ^ M ~¥tgEFAP ¥t  
 gEFAP [^ .LKL†@0B  
 yOOTOz R A æ^ M ~«i~†BfiA  
 o h ~j ~fl0~»~A` I"† ~ç  
 ~AP >~; ~† g i ~f0~  
 Ls „0-~"-«0B. ~I Au bN†  
 ~fl0 æ^ M ~« ~»~Au bN†  
 \$ .0¥tgEFAP ^ &~¥tgEFAP  
 [^ ~»†„0-~ Ls „0-~"-«  
 0B- ~ LAu bN† ~L`-«0 40  
 / ~LA`M N ~uI AbvO [h  
 .0-~"-~¥~"-~ç0B  
 yOOTPz S A@` u bN† ~CG.0  
 iç ~¥" L.0; ~ I"† L  
 ERXg~"0B  
 yOOTQz T Au bN† ~; æ^  
 M .0 ~Au bN† ~P` æ^  
 M Ffl.0` I"† ~"-~s/-~

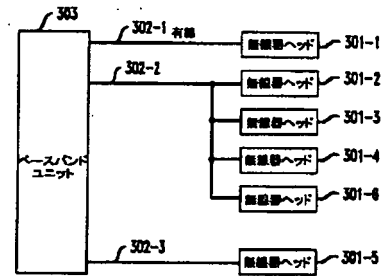
12

~"«~c /~A æ^ M i\_Cove  
 BR oC Ar[ tH[~ OA ~ l -  
 ,>~j s/-~"-«0B  
 yOOTRzu bN† VOT`AiPj/L L  
 ~ e g æ^ M g " f) ~  
 v NX AiQj~ j' g æ^ M  
 ~ l ; ~† AiRje æ^ M  
 ~ j~t' ~X g tBbN` l ¥"l  
 ^f0 / f) ~v NX AiSj m \_Co  
 [V`R oCj OZp pç~mEF[\_Co[V  
 ~R oCj O sçAj~t' ~X g tBb  
 N` l L ç¥"l 0Bu bN† V  
 OT »ç p.0B@ ~-«0~ /B  
 y)~"P" z  
 y)Pz] Zp † ~MVXe T"~B  
 y)Qz M\_Co[V` pç0] Zp n  
 u bN)B  
 y)Rz{> {Æ }/† ~MVXe T"  
 }B  
 y)Sz{> {Æ }/† ~MVXe u  
 bN)B  
 y)Tz}S † ~MVXe ]/† wbh  
 u bN)B  
 y)Uz}S † ~MVXe ]/ P x[Xo  
 h jbg u bN)B  
 y)Vz}S † ~MVXe ]/ Q x[Xo  
 h jbg u bN)B  
 y z  
 POO † ~MVXe  
 POP † [  
 POQ L  
 POR n  
 PQO † .Z ^[  
 PRO [J  
 PSO  
 PTO L [  
 ROP † wbh  
 ROQ L  
 ROR x[Xo h jbg  
 TOP A ei  
 TOQ A v  
 TOR \_E R o[^[  
 TOS M  
 UOP M  
 UOQ tB ^  
 UOS ~ l CU[  
 UOT j~m~t` l \_Co[V`R oCi

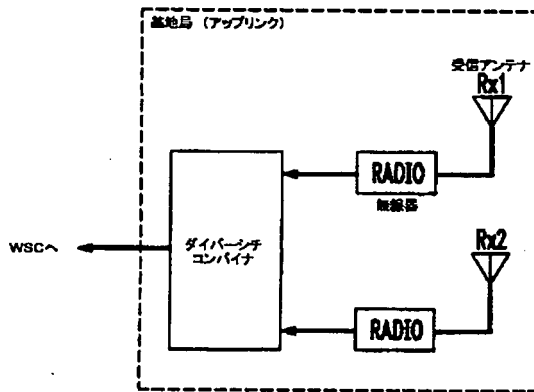
y) P z



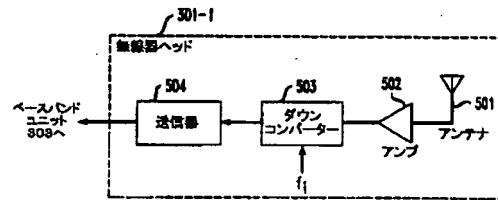
y) S z



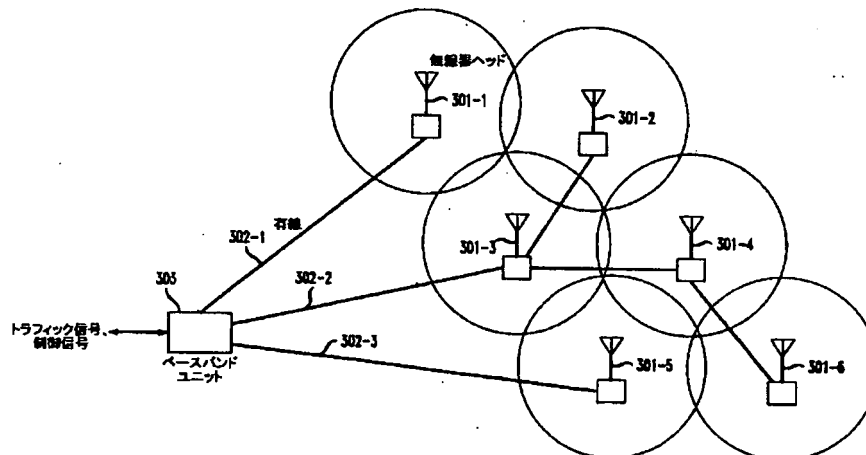
y) Q z

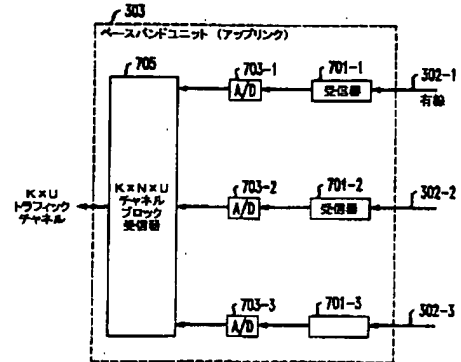


y) T z



y) R z



$$y \} \vee z$$


```
(72) > N X g t @ [ t V X U b p
A J O C08889 j [ W [ W
[ C z C g n E X X e C V C u [
C v C X 14
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